

PROPOSED AMENDMENT
U.S. SERIAL NO. 10/543,169

26. (New) A hydraulic system for mining equipment, comprising:

at least one hydraulic circuit with pressure fluid channels and at least one hydraulic pump, the hydraulic pump being arranged to generate hydraulic power in the hydraulic circuit;

at least one power unit for driving the hydraulic pump;

at least one hydraulic mining actuator connected to the hydraulic circuit and configured to act on a tool in the mining equipment;

at least one hydraulic auxiliary actuator connected to the hydraulic circuit; and

means for adjusting the hydraulic power to be led to the mining actuator and the auxiliary actuator connected to the hydraulic circuit, wherein

the hydraulic system comprises a main hydraulic circuit and at least one separate hydraulic circuit, and the main hydraulic circuit and each separate hydraulic circuit are operationally separate from each other, each having a separate hydraulic pump for generating hydraulic power; at least one mining actuator is connected to the separate hydraulic circuit and said mining actuator is configured to be driven by the hydraulic power acting in the separate hydraulic circuit; and

the power of the mining actuator connected to the separate hydraulic circuit is arranged to be adjusted by adjusting the generated hydraulic output by adjusting the pumping output of the hydraulic pump of the separate hydraulic circuit, wherein

the hydraulic pump of the separate hydraulic circuit is controlled by means of a control unit including an adjustment strategy,

the pressure of the fluid channel leading from the pump to the mining actuator of the rock drilling machine is monitored by means of a sensor,

the information on the pressure obtained from the sensor is transmitted to the control unit,

the information on the volume flow obtained from the hydraulic pump of the separate hydraulic circuit is monitored,

and the power of the mining actuator of the rock drilling machine is controlled according to the pressure and flow information and the adjustment strategy.